Response to Arguments

1. Applicant's arguments, see remark, filed 3/3/2008, with respect to the rejection(s) of claim(s) 1 and 20 under 102 (e) rejections have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Halme (Pat No.: 6912200).

Claim Objections

2. Claims 1-40 are objected to because of the following informalities: In claim 1, line 9, the variable "k" is not defined. Applicant is suggested to set the variable "k" to a certain range of values. Similar problem exist in claim 20. Appropriate correction is required.

Double Patenting Note

3. When a system or network or device described in the prior art or co-pending application, which is the same as the system or network or device described in the specification for carrying out the claimed method, it can be assumed they will inherently perform the claimed process (see MPEP section 2112.02 Process claims).

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 3-5, 7-16, 20, 22-24, 26-35 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4-6, 8-12 of copending Application No.10/735895. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

For claim 1, claim 1 of co-pending application no.: 10/735895 disclosed the method of:

1. (Original) A device for determining labeled data stream switchpath(s) in a label switched communication network comprising a multiplicity of label switched routers (LSR), each stream being associated with a chosen forwarding equivalence class and with a chosen set of service data, which device is characterized in that it includes:

- memory means (Mn) adapted to store a table (Tn1) of correspondences between sets of service data and information data representative of at least two chosen criteria and a descriptive structure (Tn2) containing information data representative of a state of utilization and of a topology of the network, and

- processing means (P) adapted:

a) to receive a path set-up request containing a set of service data associated with a stream to be switched, for determining in said table (Tn1) at least two criteria stored in corresponding relationship to said set of service data associated with the stream,

b) to ensure the connectivity of said multiplicity of nodes, on the basis of information data stored in said descriptive structure (Tn2),

c) to calculate from among said nodes (LSR) possible paths (r*) between a departure node (LER1) and a destination node (LER2) taking account of at least one of said two criteria that have been determined and then to deduce an ideal solution {Z(a)} from performances (Z(r*)) of said possible paths (r*) on at least one of said criteria,

d) to assign each possible path (r*) an interest value {U(r)} taking account of said ideal solution (Z(a)) and then classify said possible paths taking account of their respective interest values, and

e) to select a path from among said classified possible paths and then associate with said stream to be switched a label representative of said selected path so that said labeled stream is switched via said path to the destination node (LER2).

Applicant's claims 1, 20 merely broadened the scope of the claim 1 of copending application. In applicant's claim 1, part a, b, c, d is rejected respectively by claim 1, part b, c, d, e of the co-pending application. Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the method as taught by the co-pending application in the applicant's invention. The motivation for using the obviousness in the copending application being that the system greatly reduces the link cost based on difference class of requirements.

For claim 3, 22, applicant merely broadens the scope of the claim 4 of copending application.

For claim 4, 23, applicant merely broadens the scope of the claim 5 of copending application.

For claim 5, 24, applicant merely broadens the scope of the claim 6 of copending application.

For claim 7, 26, applicant merely broadens the scope of the claim 8 of copending application.

For claim 8, 27, applicant merely broadens the scope of the claim 9 of copending application.

For claim 9, 28, applicant merely broadens the scope of the claim 10 of copending application.

For claim 10, 29, applicant merely broadens the scope of the claim 11 of copending application.

For claim 11, 30, applicant merely broadens the scope of the claim 12 of copending application.

For claim 12, 31, applicant merely broadens the scope of the claim 15 of copending application.

For claim 13, 32, applicant merely broadens the scope of the claim 16 of copending application.

For claim 14, 33, applicant merely broadens the scope of the claim 17 of copending application.

For claim 15, 34, applicant merely broadens the scope of the claim 18 of copending application.

For claim 16, 35, applicant merely broadens the scope of the claim 19 of copending application.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4, 8, 9, 17-23, 27, 28, 36-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Halme (Pat No.: 6912200).

In claim 1, a) ensuring that at least a portion of the multiplicity of nodes are connected (Halme column 5, lines 40-67, column 6, lines 1-25). The measurement method is able to measure the round trip time, packet success rate and throughput before the selection of a best route, therefore the ensuring connectivity between nodes are established before the measurement of round trip time, packet success rate and throughput;

b) for the nodes of the portion, calculating possible paths between a departure node (Ns) and an arrival node, allowing for at least two chosen criteria, and then deducing an ideal solution from performances of the possible paths based on the criteria **(Halme column 6, lines 22-67).** The possible paths are calculated based on the function: equation (1) illustrated in column 6, line 48. The equation depends on at least three criteria, 1) packet round trip time, 2) packet success rate, and 3) throughput. Thus the performance value P can be an ideal solution;

c) assigning each possible path a value of interest allowing for the ideal solution and then classifying the possible paths allowing for their respective values of interest **(Halme column 6, lines 55-65).** The value P calculated for each route is used to rank the available routes in a preference order for selection of a route;

d) selecting from the classified possible paths the k best classified paths, in order to route data via one of the k paths **(Halme column 6, lines 50-65).** The value P

calculated for each route is used to rank the available routes in a preference order for selection for a route, wherein variable k can be treated as any integers.

Regarding claims 2 and 21, Halme disclosed the method of characterized in that step a) begins by determining from the multiplicity of nodes all the pairs of nodes that can establish between them an oriented link each supporting at least one chosen local constraint, after which it is ensured that all the nodes of the pairs are connected **(Halme column 5, lines 40-67, column 6, lines 1-25).** The measurement method is able to measure the round trip time, packet success rate and throughput before the selection of a best route, wherein the throughput can be the local constraint. Therefore the ensuring connectivity between nodes is established before the measurement of round trip time, packet success rate and throughput.

Regarding claims 3 and 22, Halme disclosed the method of characterized in that at the end of step b) there are retained from the possible paths those that each satisfy at least one chosen global constraint so that in step c) values of interest are assigned to the retained possible paths **(Halme column 6, lines 22-67).** The possible paths are calculated based on the function: equation (1) illustrated in column 6, line 48. The equation depends on at least three criteria, 1) packet round trip time, 2) packet success rate, and 3) throughput; wherein the throughput can be the global constraint.

Regarding claims 4 and 23, Halme disclosed the method of characterized in that at least one of the criteria is of the non-additive type **(Halme column 6, lines 22-67). The throughput is a non-additive type.**

Regarding claims 8 and 27, Halme disclosed the method of characterized in that in step b) representative performance values of the possible paths are determined for each path with respect to each of the at least two chosen criteria and a path for which the performance values are non-dominated is qualified as a possible path **(Halme column 6, lines 22-67).**

Regarding claims 9 and 28, Halme disclosed the method of characterized in that in step b) a best performance value observed over the possible paths, referred to as an optimum value, is determined for each of the at least two chosen criteria and the ideal solution is then constructed in the form of a multiplet of components constituted of the various optimum values thus determined **(Halme column 6, lines 10-67).** The possible paths are calculated based on the function: equation (1) illustrated in column 6, line 48. The equation depends on at least three criteria, 1) packet round trip time, 2) packet success rate, and 3) throughput. Thus the performance value P can be an ideal solution when the round trip time is shorter or the packet success rate is higher.

Regarding claims 17 and 36, Halme disclosed the method of characterized in that the criteria are chosen as a function of the type of service required **(Halme column 6, lines 22-67).**

Regarding claims 18 and 37, Halme disclosed the method of characterized in that the chosen criteria are weighted as a function of their importance in the light of management information **(Halme column 6, lines 22-67).**

Regarding claims 19 and 38, Halme disclosed the method of characterized in that the at least one chosen local constraint and its associated value is chosen as a function of the quality of service required **(Halme column 6, lines 22-67).**

Claim 20 is rejected similar to claim 1.

Regarding claim 39, Halme disclosed the method of wherein the communication network is an IP communication networks **(Halme column 2, lines 22-67, fig. 1).**

Regarding claim 40, Halme disclosed the method of wherein the method is implemented with link state routing protocols supporting TE-LSA traffic management **(Halme column 2, lines 22-67, fig. 1).**

Claim Rejections - 35 USC § 103

8. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 5, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halme (Pat No.: 6912200), In view of Gunluk (Pat No.: 7023806).

For claims 5 and 24, Halme silent on the method of characterized in that step b) integrates a trace storing a route corresponding to a partial path, in order to detect and prevent repetitive cycles in the paths under construction. Gunluk from the same or similar fields of endeavor teaches the method of characterized in that step b) integrates a trace storing a route corresponding to a partial path, in order to detect and prevent repetitive cycles in the paths under construction **(Gunluk see column 9, lines 43-50).** Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Gunluk in the network of Halme. The motivation of using the method as taught by Gunluk in the network of Halme being that it reduces the processing time delay.

11. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halme (Pat No.: 6912200), In view of Gunluk (Pat No.: 7023806), as applied to claim 5 above, and further in view of Johann (Pat No.: 5471467).

For claims 6 and 25, Halme and Gunluk both silent on the method of characterized in that in step b), during the procedure of eliminating the partial paths, there are retained solutions that are weakly non-dominated on the non-additive criterion. Johann from the same or similar fields of endeavor teaches the method of characterized in that in step b), during the procedure of eliminating the partial paths, there are retained

solutions that are weakly non-dominated on the non-additive criterion **(Johann column 3, lines 42-67).** Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Johann in the network of Halme and Gunluk. The motivation of using the method as taught by Johann in the network of Halme and Gunluk being that it reduces the processing time delay.

12. Claims 7 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halme (Pat No.: 6912200), In view of Khnotimsky et al. (Pat No.: 6646989).

For claims 7 and 26, Halme silent on the method of characterized in that connectivity is verified by a mechanism of propagation from the departure node to all the other nodes of the multiplicity of nodes, so that each node is visited. Khnotimsky from the same or similar fields of endeavor teaches the method of characterized in that connectivity is verified by a mechanism of propagation from the departure node to all the other nodes of the multiplicity of nodes, so that each node is visited **(Khntimsky et al. see column 7, lines 39-45).** Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Khnotimsky et al. in the network of Halme. The motivation of using the method as taught by Khnotimsky et al. in the network of Halme being that it reduces the processing time delay.

13. Claims 12 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halme (Pat No.: 6912200), In view of Kelley et al. (Pat No.: 6542469).

For claims 12 and 31, Halme silent on the method of the at least one the chosen local constraint is selected from a group comprising at least a minimum bandwidth required, the maximum length of the path, the maximum duration of the path, at least one prohibited link, and a path color restriction. Kellye et al. from the same or similar fields of endeavor teaches the method of the at least one the chosen local constraint is selected from a group comprising at least a minimum bandwidth required, the maximum length of the path, the maximum duration of the path, at least one prohibited link, and a path color restriction **(Kelley et al. see column 8, lines 57-67, column 9, lines 1-20, and see fig. 2).** In the reference, at least one pair of maximally disjoint paths and a primary path should be pre-calculated based on various network parameters, such as cost (delay) and bandwidth and bandwidth threshold. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Kelley et al. in the network of Halme. The motivation of using the method as taught by Kelley et al. in the network of Halme being that it increases the system transmission efficiency.

14. Claims 13 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halme (Pat No.: 6912200), In view of Izmailov et al. (Pub No.: 2003/0058797).

For claims 13 and 32, Halme silent on the method of characterized in that the criteria are selected from a group comprising at least the available bandwidth, the number of hops on the path, and the duration of the path. Izmailov et al. from the same or similar fields of endeavor teaches the method of characterized in that the criteria are selected from a group comprising at least the available bandwidth, the number of hops on the path, and the duration of the path **(Izmailov et al. see column 0039, lines 11-30).** Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Izmailov et al. in the network of Halme. The motivation of using the method as taught by Izmailov et al. in the network of Halme being that it enhances the system features.

15. Claims 14-16 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halme (Pat No.: 6912200), In view of Izmailov et al. (Pub No.: 2003/0058797), as applied to claim 13 above, and further in view of Roginsky et al. (Pat No.: 6034946).

For claims 14 and 33, Halme and izmailov et al. both silent on the method of characterized in that the chosen criteria used in step b) comprise the available bandwidth and the duration of the path. Roginsky et al. from the same or similar fields of endeavor teaches the method of characterized in that the chosen criteria used in step b) comprise the available bandwidth and the duration of the path **(Roginsky et al. see column 12, lines 24-40).** Thus, it would have been obvious to the person of ordinary

skill in the art at the time of the invention to use the method as taught by Roginsky et al. in the network of Halme and Izmailov et al. The motivation of using the method as taught by Roginsky et al. in the network of Halme and Izmailov et al. being that it enhances the system features.

Regarding claims 15 and 34, Izmailov et al. disclosed the method of characterized in that in step b) the criterion relating to the duration of the path is impacted by a penalty **(Izmailov et al. see column 0039, lines 11-30).**

Regarding claims 16 and 35, Izmailov et al. disclosed the method of characterized in that the penalty applies to the administration cost of the path **(Izmailov et al. see column 0039, lines 11-30).**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAN YUEN whose telephone number is (571)270-1413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Ricky Ngo/
Supervisory Patent Examiner, Art Unit 2616

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